

Amsterdam Institute for Advanced Metropolitan Solutions

roboats - autonomy on water

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Mobilitätsarena 2022 | AUTOMATICAR











CONTENT

- Mobility challenges in Amsterdam
- Roboat: vision for autonomy on water
- Technology design and development
- What's next?

Problem #1: Amsterdam has serious mobility challenges



Cars in Amsterdam

234.000 privately owned

384 ton co2 2016

- 11% of public space allocated to parking for cars
- 40% of cars stand still all day
- City goal of removing 10.000 parking spots in 2025

High demand public transport

Busses & trucks

- 5900 trucks 2017 and increasing
 - 20.912 commercial vans
 - 286 state-owned busses

Bikes

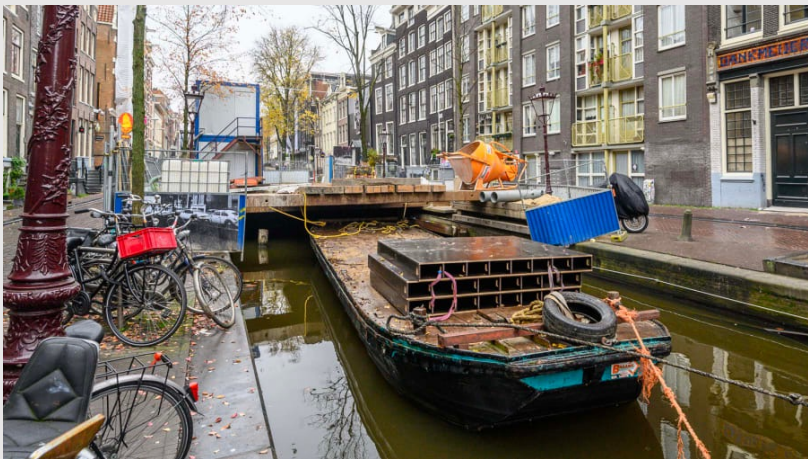
- 904.000 bikes

Congestion

Emissions

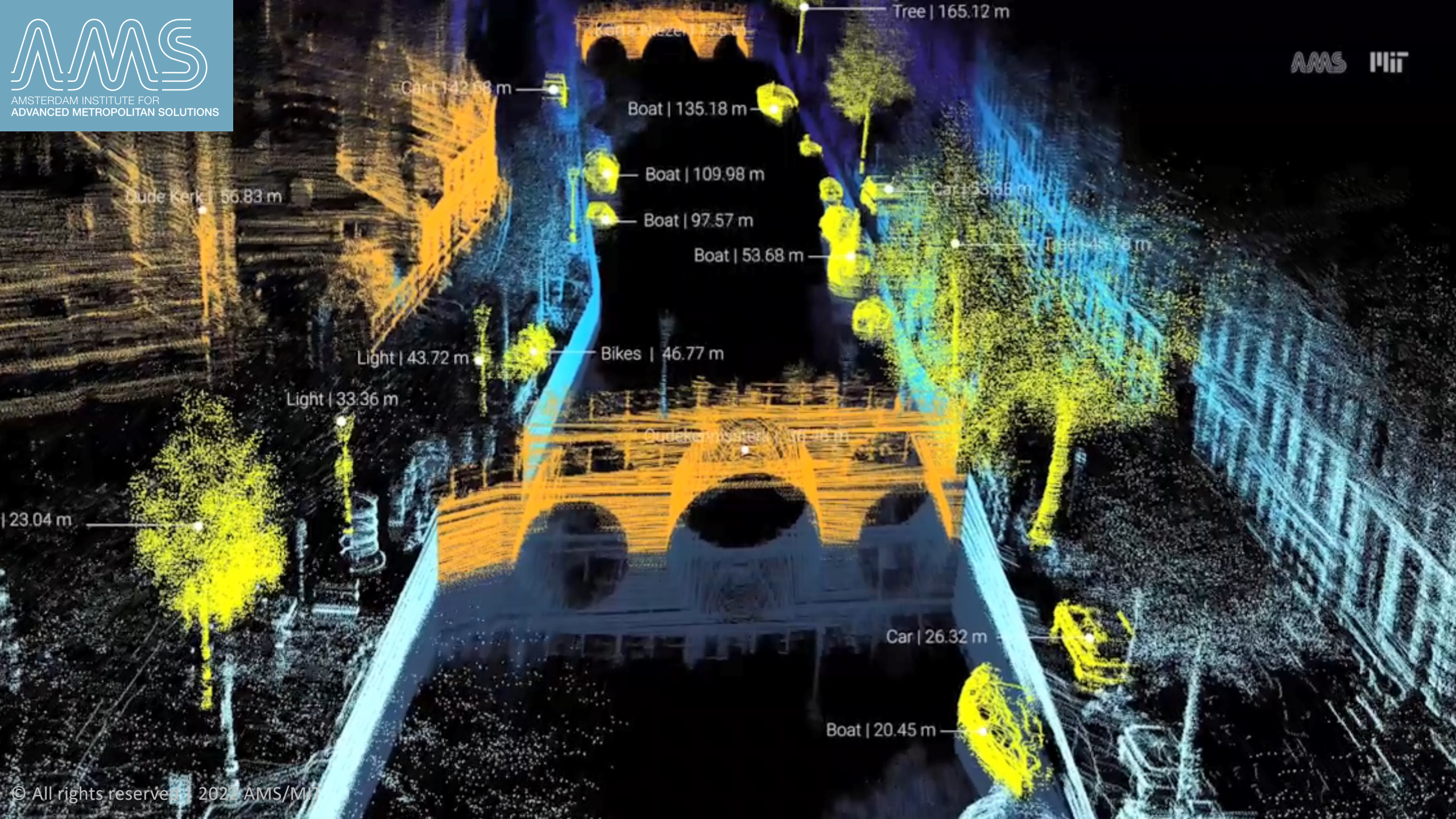
**Lack of public
space**

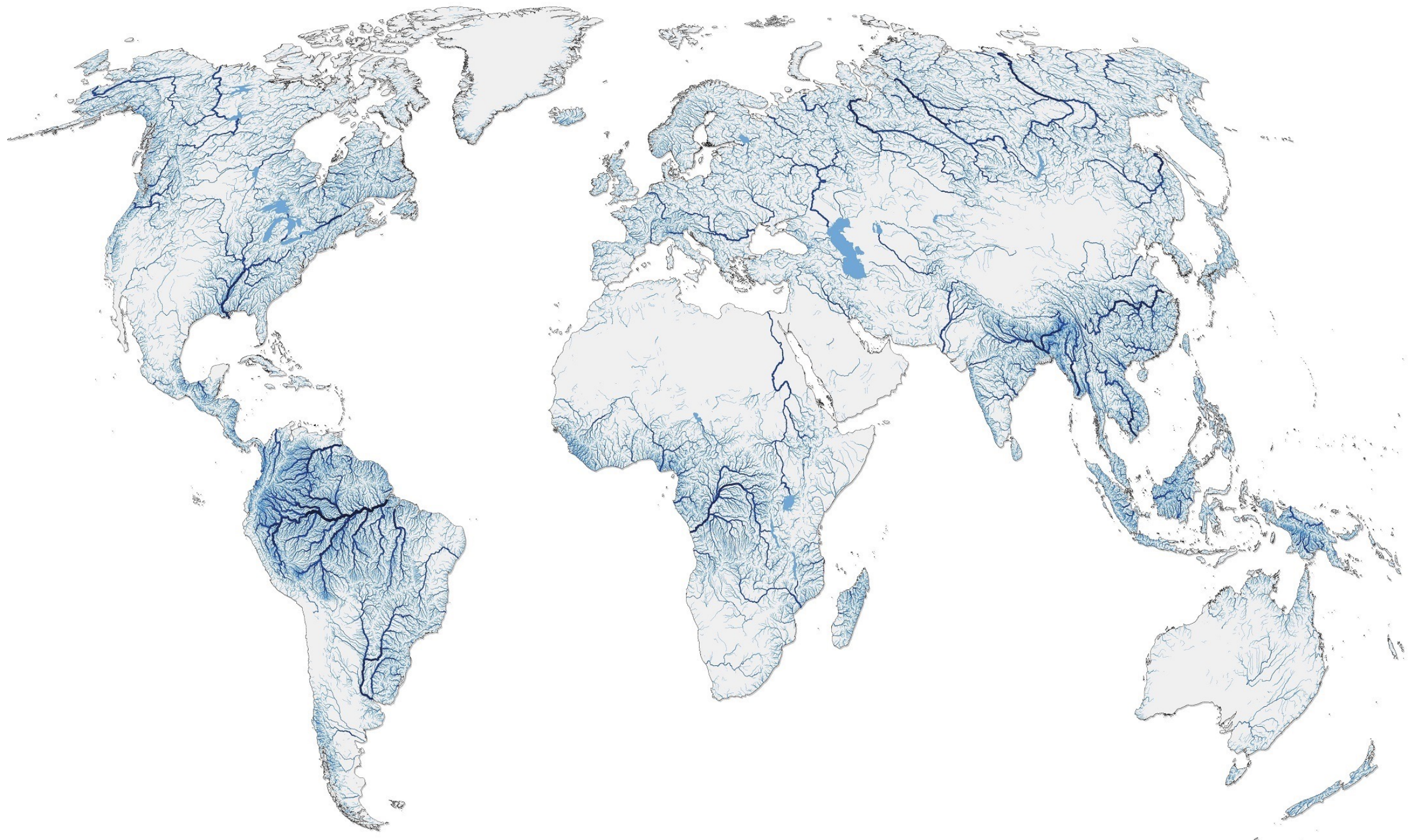
Problem #2: Heavy transport damages historic infrastructure











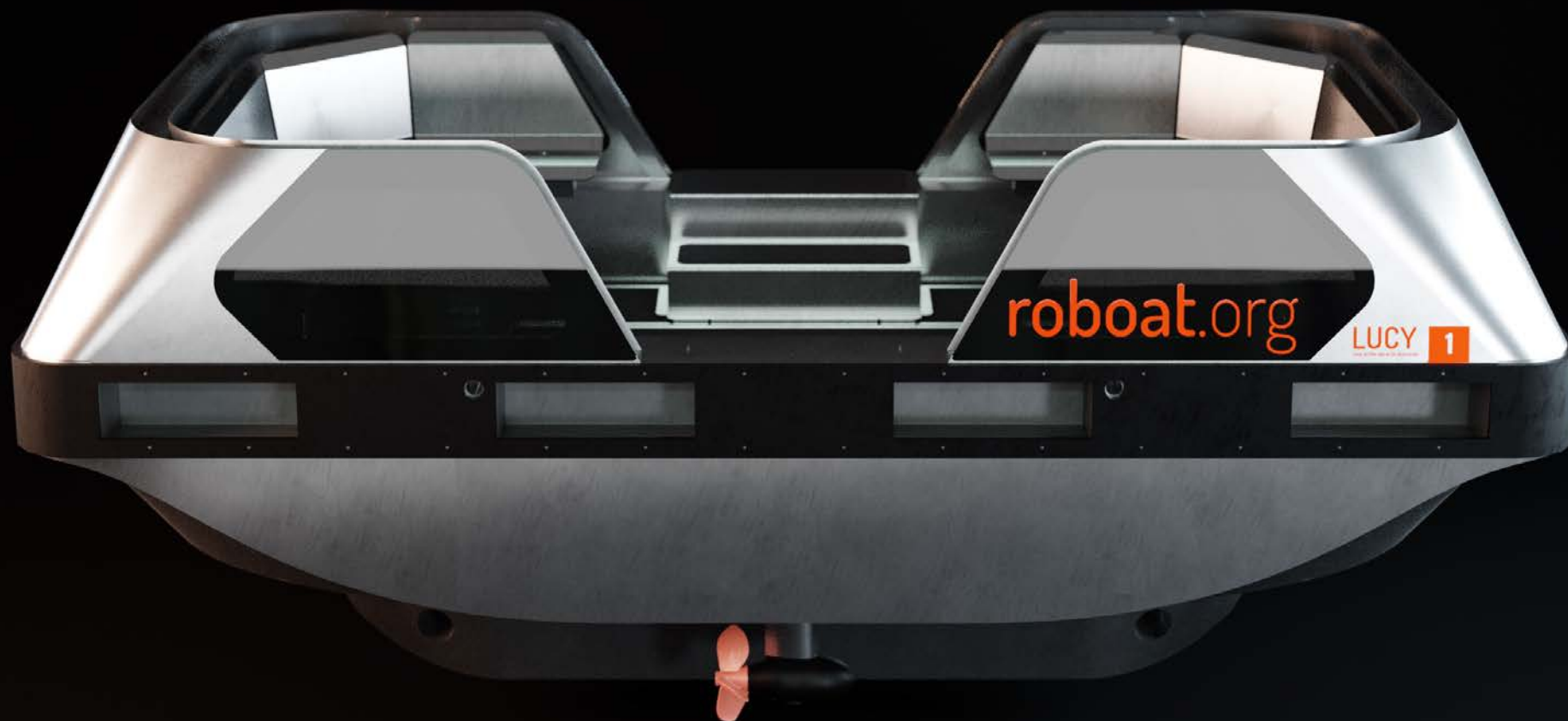


ROBOAT

Autonomous zero-emission transport
over water of people or goods,
revitalizing the canal system

high utilization, safer, cost reduction





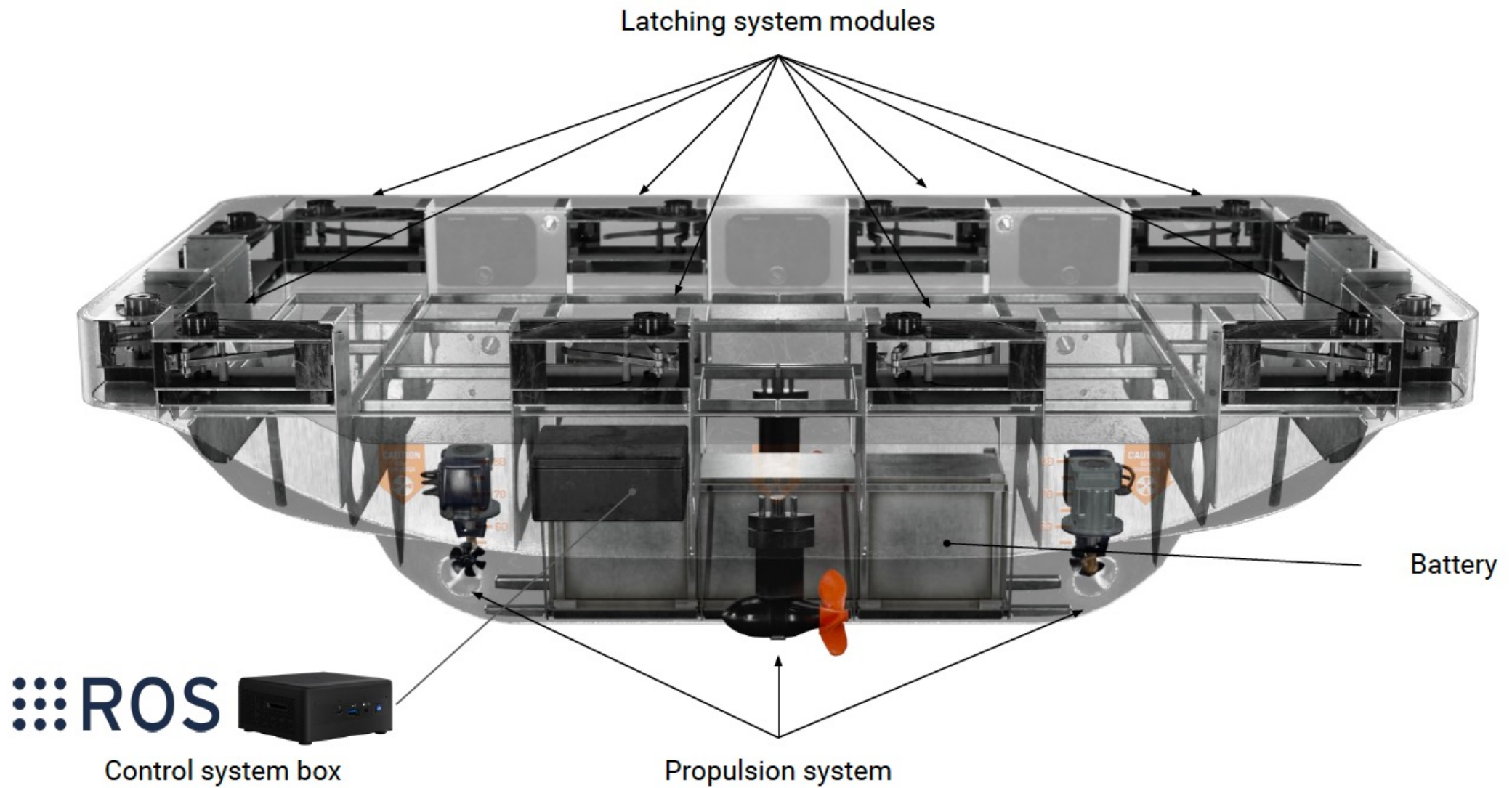


Design and technology overview

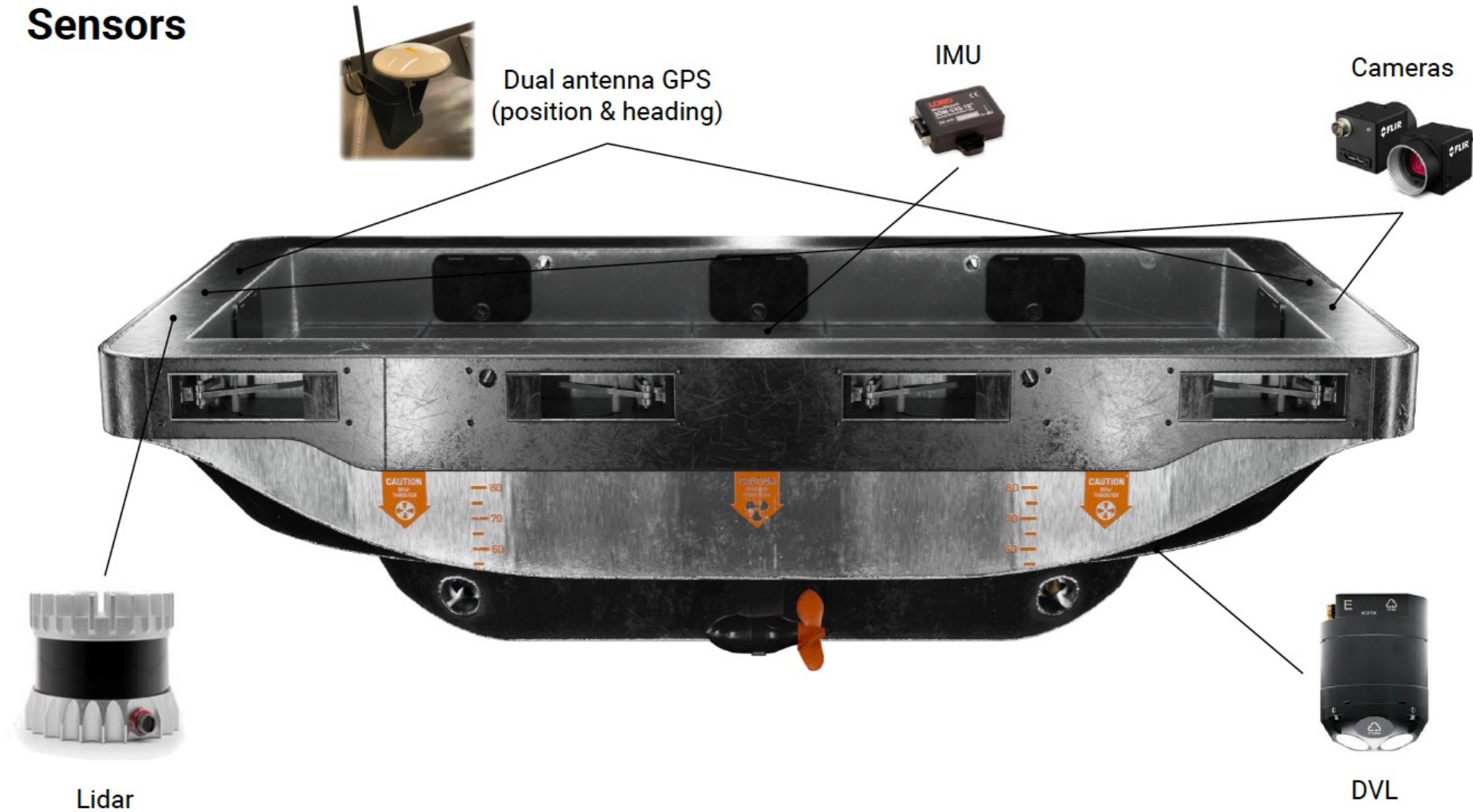








Sensors



UNIQUE ROBOAT FUNCTIONS

- Path planning and motion tracking
- Object detection and basic collision avoidance
- Hovering, autonomous docking and mooring
- High-precision omni-directional maneuvering (~ 10 cm)
- Latching capabilities to connect to other ships or dock
- Payload dependent control





Partner ecosystem

Partners & sponsors



Active pilots



Cities that expressed interest



What is next?

Technology development

- Improve **localisation** in urban environments and inland waterways (ao beneath bridges)
- Improve **collision avoidance** and more complex vessel interactions
- Transferring tech stack for **retrofitting existing ships**
- Sailing, sailing, sailing ... **making hours**

Commercialization

- **Spinning-off** into Roboat Tech **company** in **Q1 2023** + raise capital
- **Pilot** at public **transport ferries** in Amsterdam: improving safety and efficiency on ferries
- **Pilot** preparation for Paris, linked to the **Olympic Games 2024**

Please join this journey, and reach out!





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